REMARKS

This Amendment, filed in reply to the Office Action dated April 19, 2007, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

By this Amendment, Applicant adds new claims 10-18. Accordingly, claims 1-18 are now pending in the application.

I. Formalities

The Examiner has indicated that the drawings filed on March 29, 2004 have been accepted.

The Examiner has also initialed and returned copies of the SB/08s submitted with the Information Disclosure Statements filed on March 19, 2004 and June 16, 2004.

The Examiner did not acknowledge Applicant's claim for foreign priority or confirm receipt of the certified copy of the Priority Document. Applicant respectfully requests that the Examiner acknowledge the claim for priority and confirm receipt of the Priority Document.

II. Claim Rejections under 35 U.S.C. § 101

The Examiner has rejected claim 8 under 35 U.S.C. § 101, alleging that the claimed invention is directed to non-statutory subject matter.

Claim 8 is canceled without prejudice or disclaimer. Therefore, the rejection of claim 8 under 35 U.S.C. § 101 is rendered moot.

III. Claim Rejections under 35 U.S.C. § 112

The Examiner has rejected claim 3 under 35 U.S.C. § 112, second paragraph, alleging that it is unclear what "symptom" stands for.

Claim 3 has been amended for clarification. Claim 3 is believed to meet the requirements under 35 U.S.C. § 112, second paragraph.

IV. Claim Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1-9 under 35 U.S.C. § 102(b) as being allegedly anticipated by Takeo et al. (U.S. Patent No. 5,732,121, hereinafter "Takeo").

With regard to claim 1, Takeo fails to teach each feature of the claim. For example, claim 1, as amended, recites that the inner/outer outline region includes the entire outline of the candidate regions.

Takeo relates to detecting prospective abnormal patterns in a radiation image by obtaining a probability density function of the image signal, which corresponds to a region, that is inward from a contour of the prospective abnormal patterns. *See* abstract. Specifically, for each of the prospective abnormal patterns, the area A of the pattern and the center of gravity AO on the pattern are calculated. *See* col. 16, lines 37-40 and Fig. 1. Referring to Fig. 6, a virtual circle having an area approximately equal to the area A, and its center at the position at which the center of gravity AO is located is set. *See* col. 16, lines 41-45. The virtual circle has a radius R. *Id.* Thereafter, a first region ($r<4R/3$) is set with respect to the virtual circle having the radius R. See col. 16, lines 48-50. A second region ($R<r<4R/3$) is set, which is a doughnut-like annular region sandwiched between an inner circle having a radius larger than the radius R and an outer circle having a radius smaller than 4R/3. *See* col. 16, lines 51-55.

In Takeo, the first region is shaped in a circle. Whereas the contour of the prospective abnormal patterns is irregular. Because the area of the first region is no smaller than the area of the prospective abnormal patterns, part of the contour of the prospective abnormal patterns falls within the first region. Therefore, the donut-shaped second region, which is in the vicinity of the

contour of the prospective abnormal patterns, does not include the entire contour of the prospective abnormal patterns. On the contrary, claim 1 recites that the inner/outer outline region includes the entire outline of the candidate regions.

In view of the above, claim 1 should be patentable. Claims 2-6 should be patentable at least because of their dependency from claim 1. Claims 7 and 9 should be patentable at least for reasons similar to claim 1 because claims 7 and 9 recite features that are similar to those of claim 1.

With further regard to claim 4, the claim recites

> a density pattern extracting means, for extracting density patterns, which are present within unit pixel groups that constitute the inner/outer outline images, extracted by the inner/outer outline image extracting means;
>
> a presence frequency calculating means, for judging which of the density patterns the unit pixel groups of the inner/outer outline images are similar to, and calculating presence frequencies by counting the presence of the similar density patterns within the inner/outer outline image;

According to the present invention as described in claim 4, the unit pixel groups are regions in the inner/outer outline image extracted from the candidate region. Further, each of the unit pixel groups includes a plurality of pixels, and the unit pixel groups are separately judged to analyze the inner/outer outline image. In contrast, in Takeo, the areas in the donut-shaped second region are not analyzed separately. Therefore, Takeo does not teach extracting density patterns, which are present within unit pixel groups that constitute the inner/outer outline images and judging which of the density patterns the unit pixel groups of the inner/outer outline images are similar to. Claim 4 is patentable for this additional reason.

V. New Claims

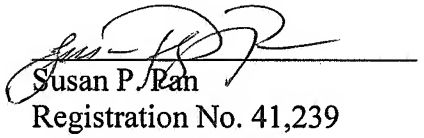
Claims 10-18 are added to claim the invention more particularly.

VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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